Refine Search

Search Results -

Terms	Documents
L7 and (atmospheric near pressure)	4

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L8

Refine Search

Recall Text Clear Interrupt

Search History

DATE: Monday, June 21, 2004 Printable Copy Create Case

Set Name side by side	**Query**	**Hit Count**	**Set Name** result set
	DB=USPT; PLUR=YES; OP=ADJ		
L8	L7 and (atmospheric near pressure)	4	L8
L7	L6 and torr	12	L7
L6	L4 and (ratio near5 oxygen)	18	L6
L5	L4 and (ratio near5 nitrogen)	5	L5
L4	L3 and (inert or argon or ar or helium or he or neon or ne or kr or xenon or xe or nitrogen)	152	L4
L3	L2 and (hf02 or zro2 or ta2o5 or tio2 or al2o3 or hfsio)	197	L3
L2	L1 and oxidation	27757	L2
L1	(oxide adj layer) or oxynitride or (high K)	63140	L1

END OF SEARCH HISTORY

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 6569529 B1

L8: Entry 1 of 4 File: USPT May 27, 2003

US-PAT-NO: 6569529
DOCUMENT-IDENTIFIER: US 6569529 B1

TITLE: Titanium-containing interference pigments and foils with color shifting properties

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KMC | Draw De

---

☐ 2. Document ID: US 6197438 B1

L8: Entry 2 of 4 File: USPT Mar 6, 2001

US-PAT-NO: 6197438
DOCUMENT-IDENTIFIER: US 6197438 B1

TITLE: Foodware with ceramic food contacting surface

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KMC | Draw De

---

☐ 3. Document ID: US 5828080 A

L8: Entry 3 of 4 File: USPT Oct 27, 1998

US-PAT-NO: 5828080
DOCUMENT-IDENTIFIER: US 5828080 A

TITLE: Oxide thin film, electronic device substrate and electronic device

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KMC | Draw De

---

☐ 4. Document ID: US 5382742 A

L8: Entry 4 of 4 File: USPT Jan 17, 1995

US-PAT-NO: 5382742
DOCUMENT-IDENTIFIER: US 5382742 A

TITLE: Gallium-containing zeolite MCM-22

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw D

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L7 and (atmospheric near pressure)	4

Display Format: TI Change Format

Previous Page Next Page Go to Doc#

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 5 of 5 returned.

☐ 1. Document ID: US 6743681 B2

L5: Entry 1 of 5 File: USPT Jun 1, 2004

US-PAT-NO: 6743681
DOCUMENT-IDENTIFIER: US 6743681 B2

TITLE: Methods of Fabricating Gate and Storage Dielectric Stacks having Silicon-Rich-Nitride

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

☐ 2. Document ID: US 6638599 B2

L5: Entry 2 of 5 File: USPT Oct 28, 2003

US-PAT-NO: 6638599
DOCUMENT-IDENTIFIER: US 6638599 B2

TITLE: Magnetic recording medium

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

☐ 3. Document ID: US 6248669 B1

L5: Entry 3 of 5 File: USPT Jun 19, 2001

US-PAT-NO: 6248669
DOCUMENT-IDENTIFIER: US 6248669 B1

TITLE: Method for manufacturing a semiconductor device

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

☐ 4. Document ID: US 6197438 B1

L5: Entry 4 of 5 File: USPT Mar 6, 2001

US-PAT-NO: 6197438
DOCUMENT-IDENTIFIER: US 6197438 B1

TITLE: Foodware with ceramic food contacting surface

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw. D

5. Document ID: US 6071601 A

L5: Entry 5 of 5 File: USPT Jun 6, 2000

US-PAT-NO: 6071601
DOCUMENT-IDENTIFIER: US 6071601 A

TITLE: Coated cutting tool member

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw. D

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L4 and (ratio near5 nitrogen)	5

Display Format: TI Change Format

Previous Page Next Page Go to Doc#

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 6 of 6 returned.

---

1. Document ID: US 6572784 B1

L9: Entry 1 of 6 File: USPT Jun 3, 2003

US-PAT-NO: 6572784
DOCUMENT-IDENTIFIER: US 6572784 B1

TITLE: Luminescent pigments and foils with color-shifting properties

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KMC | Draw De

---

2. Document ID: US 6521808 B1

L9: Entry 2 of 6 File: USPT Feb 18, 2003

US-PAT-NO: 6521808
DOCUMENT-IDENTIFIER: US 6521808 B1

TITLE: Preparation and use of a catalyst for the oxidative dehydrogenation of lower alkanes

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KMC | Draw De

---

3. Document ID: US 6461989 B1

L9: Entry 3 of 6 File: USPT Oct 8, 2002

US-PAT-NO: 6461989
DOCUMENT-IDENTIFIER: US 6461989 B1

TITLE: Process for forming 312 phase materials and process for sintering the same

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KMC | Draw De

---

4. Document ID: US 6071601 A

L9: Entry 4 of 6 File: USPT Jun 6, 2000

US-PAT-NO: 6071601
DOCUMENT-IDENTIFIER: US 6071601 A

TITLE: Coated cutting tool member

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw D

---

5. Document ID: US 5795631 A

L9: Entry 5 of 6 File: USPT Aug 18, 1998

US-PAT-NO: 5795631
DOCUMENT-IDENTIFIER: US 5795631 A

TITLE: Method of producing transparent and other electrically conductive materials

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw D

---

6. Document ID: US 5514229 A

L9: Entry 6 of 6 File: USPT May 7, 1996

US-PAT-NO: 5514229
DOCUMENT-IDENTIFIER: US 5514229 A

TITLE: Method of producing transparent and other electrically conductive materials

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw D

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L6 and microstructure	6

Display Format: TI Change Format

Previous Page Next Page Go to Doc#

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 6682826 B2

L10: Entry 1 of 4 File: USPT Jan 27, 2004

US-PAT-NO: 6682826
DOCUMENT-IDENTIFIER: US 6682826 B2

TITLE: Magnetic recording medium, method of manufacturing therefor, and magnetic read/write apparatus

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

☐ 2. Document ID: US 5795631 A

L10: Entry 2 of 4 File: USPT Aug 18, 1998

US-PAT-NO: 5795631
DOCUMENT-IDENTIFIER: US 5795631 A

TITLE: Method of producing transparent and other electrically conductive materials

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

☐ 3. Document ID: US 5597771 A

L10: Entry 3 of 4 File: USPT Jan 28, 1997

US-PAT-NO: 5597771
DOCUMENT-IDENTIFIER: US 5597771 A

TITLE: Layered catalyst composite

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

☐ 4. Document ID: US 5514229 A

L10: Entry 4 of 4 File: USPT May 7, 1996

US-PAT-NO: 5514229
DOCUMENT-IDENTIFIER: US 5514229 A

TITLE: Method of producing transparent and other electrically conductive materials

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw. D

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L6 and (oxygen adj containing)	4

Display Format: TI Change Format

Previous Page Next Page Go to Doc#

L11: Entry 2 of 4 File: USPT Jul 17, 2001

DOCUMENT-IDENTIFIER: US 6261934 B1
TITLE: Dry etch process for small-geometry metal gates over thin gate dielectric

Abstract Text (1):
Fabrication of metal-on-conductive-diffusion-barrier-on-gate-dielectric structures is done by: etching the metal, by plasma-assisted anisotropic etching, down to and into the barrier metal; and then etching the remainder of the barrier layer by a dry chemical-downstream-etching process, during which the barrier layer is not exposed to ion bombardment. In the case of tungsten over titanium nitride, high selectivity and good profiles are preferably obtained, by: during the tungsten etch, using a combination of low temperature, relatively low bias, and the addition of nitrogen; and during the titanium nitride etch, using a chemical downstream etch instead of the conventional wet etch (in boiling H2SO4). (This allows better control of undercutting, and eliminates wet strip process.)

Brief Summary Text (12):
The definition of the gate electrode stack on ultra-thin (<3 nm) gate oxides for sub-tenth-micron transistors imposes a severe challenge to the etch process. Very high selectivity to SiO2 has to be achieved to avoid oxide punchthrough and subsequent damage to the silicon in the source and drain regions. Even when successfully stopped in the gate oxide, the conventional gate etch process introduces corner damage to the gate structure that needs to be annealed to guarantee good gate oxide integrity (GOI) properties of the transistor. However, it is difficult to anneal the corner damage on metal gate structures, since tungsten and titanium nitride readily oxidize in conventional oxidation processes. One solution to this problem might be to use a wet etch to slightly undercut the titanium nitride layer, moving the active gate region away from the damaged corners. However, since the selectivity of the wet etch towards tungsten is very low, the tungsten sidewall needs to be protected with a spacer prior to the titanium nitride undercut etch. This adds significant complexity to the device fabrication flow and severely reduces the process window, since the amount of undercut, and consequently the effective gate length, depends on the spacer thickness. Another approach might be to etch the titanium nitride with a process that does not cause corner damage.

Brief Summary Text (25):
No smile oxidation is required since the gate oxide is undamaged;

Detailed Description Text (32):
Following is a more extensive account of a first group of results. This group of results shows a novel all dry process for defining sub-tenth-micron W/TiN gates on ultra-thin (<3 nm) gate oxides. The process was optimized to have high selectivity to gate oxide and W eliminating the need of capping the W during TiN etch. Also, it does not introduce charge or corner damage to the gate oxide making unnecessary the gate annealing (or "smiling oxidation") after etch.

Detailed Description Text (34):
The CDE process was developed in a Mattson ASPEN II asher. The system has an inductively coupled plasma (ICP) source that generates the excited species remote from the wafer surface. Two grounded metal grids prevent charged species from

reaching the wafers assuring an isotropic process without any. charge damage. Oxygen (O2) and hexafluoroethane (C2F6) were selected as process gases. A flow ratio of O2 to C2F6 higher than 100 to 1 was used. Two process temperatures were investigated, 250 C. with the wafers placed on a heated chuck or room temperature with the wafers raised on three pins.

Detailed Description Text (38):
"overlap" capacitors where the edges of the top electrode were located on thick field oxide. Local oxidation of silicon (LOCOS) isolation was used for the capacitor fabrication. Three failure distributions were analyzed:

Detailed Description Text (43):
FIG. 1A shows the TiN removal as a function of the exposure time to the O2+C2F6 process, for blanket TiN layers processed at 250 C. (Hot-open circles) and at room temperature (Cold-full circles). Note that the process temperature does not have a strong impact on the TiN removal process. TiN is normally etched using chlorine-based plasmas. TiO2 is extremely non-volatile (indeed refractory) and TiF4 is normally considered non-volatile as it sublimes at 284 C. at one atmosphere pressure. Thus, it is very surprising that the TiN removal can be adequately performed with an oxygen/fluorine ambient having a high O to F ratio, as the one used. A possible explanation for this is that the process under study is performed at low pressures (less than 2 torr) which could reduce the temperature at which TiF4 becomes volatile to below the process temperature, resulting in the etch of the TiN film.

Detailed Description Text (69):
FIG. 5B compares the hole mobilities for pMOS devices with p+ poly- and metal-gate, as well as different gate dielectrics (3 nm of pure SiO2, or RPNO oxynitride); all the devices have the same channel implant. Also shown is the "Universal Mobility Curve" (Universal) for holes from J. T. Watt et al. The metal-gate pMOS is observed to have slightly higher hole mobility (and closer to the universal mobility) than the p+ gate case.

Detailed Description Text (85):
For example, in alternative embodiments the preferred SiO2 gate dielectric is replaced by oxynitride (as described in the IEDM papers cited above), or by Ta2O5, or by BST or PZT or other high-permittivity materials.

CLAIMS:

12. A fabrication method, comprising the steps of:

(a.) forming a gate stack layer which at least partially overlies a semiconductor region, and which includes therein

a metal conductor layer, overlying

a conductive diffusion barrier comprising titanium and nitrogen, overlying

a gate dielectric which provides capacitive coupling to said semiconductor region; and

(b.) etching said gate stack layer in a pattern, using a process which includes the substeps of:

(i.) etching the metal, by plasma-assisted anisotropic etching, down to and into the barrier metal, and then

(ii.) etching the remainder of the barrier layer by a dry chemical-downstream-etching process which includes oxygen and fluorine sources, and substantially no

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 4 of 4 returned.

---

1. Document ID: US 6444542 B2

L11: Entry 1 of 4 File: USPT Sep 3, 2002

US-PAT-NO: 6444542
DOCUMENT-IDENTIFIER: US 6444542 B2

TITLE: Integrated circuit and method

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

2. Document ID: US 6261934 B1

L11: Entry 2 of 4 File: USPT Jul 17, 2001

US-PAT-NO: 6261934
DOCUMENT-IDENTIFIER: US 6261934 B1

TITLE: Dry etch process for small-geometry metal gates over thin gate dielectric

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

3. Document ID: US 6211035 B1

L11: Entry 3 of 4 File: USPT Apr 3, 2001

US-PAT-NO: 6211035
DOCUMENT-IDENTIFIER: US 6211035 B1

TITLE: Integrated circuit and method

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

---

4. Document ID: US 5983906 A

L11: Entry 4 of 4 File: USPT Nov 16, 1999

US-PAT-NO: 5983906
DOCUMENT-IDENTIFIER: US 5983906 A

TITLE: Methods and apparatus for a cleaning process in a high temperature, corrosive, plasma environment

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw D

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L4 and (flow adj ratio)	4

Display Format: TI Change Format

Previous Page Next Page Go to Doc#